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HEARING ON

TOXIC SUBSTANCES CONTROL ACT

March 3, 1977

7:00 p.m.

The Palmer House
State Ballroom
Chicago, Illinois

Diane Hromek
Court Reporter
Diane Hromek & Associates, Inc.

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16. ABSTRACT

Panelists representing government, industry, and consumers discussed the Toxic Substances Control Act, what it requires of the U.S. EPA, industry, States, and others with direct responsibilities under the Act.

Panelists' objections were voiced, such as budget considerations possibly being too small for the Act to be put into effect and enforced as it should. Another concern expressed was that data from industry and contractors should be viewed interpretively rather than simply accepted at face value all the time.

Other groups such as consumer advocates and environmentalists also stated their concerns about the Act and the things we are exposed to because of the environment we live in today.

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PRESENT:

PANEL MEMBERS:

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DR. SAMUEL EPSTEIN, M.D., UNIVERSITY OF ILLINOIS

DR. FREDERICK ETTNER, M.D.

MS. JUDY MOOR, U.S. FOOD & DRUG ADMINISTRATION

MS. DOROTHY WERNER, CONSUMER ADVOCATE

MR. KARL BREMER, US EPA REGION V

ALSO PARTICIPATING:

MR. DAVID COMEY

MR. AL COX

MR. STEVE KLINE

MS. MARGARET HOUSTON

MR. JAMES SCHAUFNER

MS. MARY ANN SMITH

MRS. ANNA MAY BOTON

MR. HOWARD POST

MR. VICTOR DENSLOW

MR. ALEXANDER: I think perhaps we better

L1 get started.

We don't want to run too late on you this evening.

My name is George Alexander and I am the Regional Administrator for the Environmental Protection Agency.

I welcome you here tonight. I appreciate your coming.

As most of you know, we have had an all-day meeting today on the New Toxic Substances Control Act, and this follow-up tonight on health defects and health aspects of toxic substances.

I think Miss Botts has arranged an outstanding panel for you tonight. My voice I think is going to make it.

I just want to say that we are very interested in this particular area. It is an area of great problems for the environment and public health. It is something that is going to require more and more of our attention and efforts.

So once again let me welcome you tonight.

I am going to turn the program over to Miss Botts who will introduce the first part of the program which happens to be a film and slide show, and then the second part will be a panel.

L2

I invite all of you to participate any way that you will. Thank you very much.

HEARING OFFICER BOTTS: Thank you, George.

Last October, the 94th Congress passed a new law which is called Toxic Substances Control Act.

The purpose of this law is to prevent in the future the kinds of tragic situations which have developed over and over again in this country as we discovered that substances that we have commonly used in every day life do have effects on human beings and other forms of life.

The purpose of this all-day meeting that has been going on today, was for the Environmental Protection Agency to explain to all members of the public what the law requires the Agency to do -- and the program during the day was aimed particularly at Industry, and State Agencies, and others who will have specific responsibilities under

the Act.

The Act says that the industry must test new substances before they are used in the marketplace or before they are used in manufacturing and it also says that a substance that has been used in the past that is going to be used in a different way must be tested.

L3

The Environmental Protection Agency has responsibility for writing the regulations and defining the terms that are in the law as Congress passed it last fall.

But because of the interest in the public health problem that toxic substances pose in the country, we also decided to hold this special evening session for persons who have an interest in this kind of problem who want information and who are concerned about some of the sticky questions that Congressional actions probably are not going to be able to answer.

In our form of government, we have to get a lot of people in on making what are often very difficult decisions, and EPA is seeking your contribution to our decision-making as we struggle with some really very, very

difficult problems related to toxic substances.

L4 We are going to start this evening's program by showing you a slide show which tells about the law -- what the law says, what the EPA must do, what people who use the substances covered by the law must do.

The movie called, "Can We Fish Again," is a short movie that was made by Bob Osborne here in Chicago.

Some of you may remember that Bob was the environmental reporter on Channel 2 -- on CBS, a station here in Chicago for some years, and he, about in 1965, he made a -- he did a TV special which is still being used very widely as a movie called, "Too Thick to Navigate, Too Thin to Cultivate".

It was sort of a definitive statement about the problems facing Lake Michigan.

Well Bob came to the Regional Office of the Environmental Protection Agency last summer -- told us that he was very, very concerned about all the problems with PCB's and PBB's and -- we could go on all night listing the substances; that he had an idea for a movie that

he would like to make, that would explain to people about this problem. And he has made the movie which we are going to show you tonight, too, because it does state the problem.

L5

And following the movie, our panelists will make brief statements, and we are going to devote the remainder of the evening to answering questions that you raise.

We will have our panelists here -- we have representatives both of EPA and the Food and Drug Administration who would share some responsibilities for protecting the public health and hope that we will be able to give you as much information as we can so that you will participate with us in making these decisions.

I hope you all signed in, gave us your name and address on one of the pink cards out on the table so that if we have future meetings or materials to mail out and you are interested in this particular subject, we can get them to you.

To the door, to the left of the door outside are informational materials -- if you didn't help yourself when you came in, please go back to them and help yourself when you go out.

They tell about the law and other subjects.

Now, we are going to start now with the slide show and we will go almost immediately into the movie in order to get through that part of the program.

I do want to explain that most of the people attending today's session did represent state agencies, many industries from the -- all of the six states that our Regional Office is responsible for and we explained to them that we were going to show the slide movie again and they could come late to tonight's session. So we may have people coming in who came in late because they had already seen what was shown.

Let's go with the slide show, then.

MR. BREMER: Maybe I better introduce myself.

I am Karl Bremer from Region V, and I was recently appointed as a Toxic Substances Coordinator for the Region.

I may have talked to a number of

you in the past on different problems as they have arisen, and Lee asked me tonight if I could give you a presentation of the slides that were given to us from the Office of Toxic Substances in Washington.

And I hope this will explain or give you kind of an overview of what the Act does -- although many of you probably have seen quite a few documents on this already. So if you would go ahead with those -- do we have -- here we go.

Could you turn the lights down -- and just put that first slide on there.

(WHEREUPON, slides were shown while Karl Bremer narrates.)

MR. BREMER: Chemical substances are all around us. They are in our air, water, food, and in the things we touch.

For most of these substances we have little knowledge of the ill effects they might cause after many years of exposure.

The Act itself, the Toxic Substances Control Act, TSCA, is designed to improve our understanding of the chemicals around

us and to regulate any chemical which may
L8 threaten human health or environment.

The slides tonight will kind of give you an overview of this.

Our society, and the economy itself greatly benefit from chemicals. Each year hundreds of billions of pounds of chemicals are produced.

The dramatic surge in the development and of synthetic organic chemicals since World War II, and a three-hundred thousand billion investment have led to a great variety of new synthetic fibers and dyes which are used in much of our wardrobe.

There are millions and millions of miles throughout the country of lightweight plastic cable and flexible pipe as seen here -- in some of the PBC pipe that is used in trickle hose systems.

The other use, Point B, in synthetic fibers, which actually replace human tissue -- or in plastics to actually control the environment of a new-born infant.

In general, chemicals can also

be used to produce better crops as many of our fertilizers contain various amounts of micro and macro nutrients.

In the past 30 years, the chemical industry has expanded greatly in the use of materials for housing -- materials -- paints and other coatings. And also indeed enhanced our leisure time with durable and lightweight plastics.

For example, in the use in this fiberglass sailboat.

Over a million workers are also employed by the plastic chemical industry and millions of others work in chemically dependent industries.

We enjoy the economic benefits of chemicals while production continues -- shift after shift.

However, at the same time, a potentially serious risk of chemicals are often neglected or actually unknown.

There are also acute hazards of some chemicals. And workers are generally warned about such things and may be protected

against such hazards.

10

Many long-term effects such as lung damage suffered by a former steel worker are discovered and those effects are only discovered a long time after the damage has been done.

In this slide you will see a survey which was actually performed by the National Cancer Institute indicating relatively high incidences of cancer in the Northeast and Gulf Coast states.

Exposure to chemicals in these industrial areas is likely to be higher than in some other areas.

In general we don't know what the long-term effects of the billions of pounds of chemicals produced each year might actually be. Only a few of the tens of thousands of chemicals in commerce have been tested for such effects in laboratory animals.

Unfortunately, however, there are many -- many stories which illustrate the tragic consequences of not knowing how dangerous a chemical may be.

This actual chemical plant

11 is in Minimata, Japan.

In the early 1950's, as I am sure you heard, the fishing community of this town didn't know that a disease struck their families.

In some case it killed a number of individuals leaving others permanently crippled and mentally impaired.

This actual series of effects was caused by mercury discharged by the particular plant.

Similarly, however, for years no one has really realized that workers at this factory in Philadelphia were breathing cancer-causing chemicals.

Between 1948 and 1962, workers who loaded these kettles in this particular factory by hand were frequently exposed to fumes of chloro-ethyl ether.

No one knew the exposure to fumes containing this particular chemical could result in deadly lung cancer.

In 1962, three cases of lung cancer

were diagnosed among workers in a plant. But it was not until several years later that this particular compound, BCME, was discovered as causing lung cancer.

I.12

The workers had been exposed to over 100 chemicals and it was quite hard to isolate each one.

Each chemical had to be reviewed as nothing or little or nothing was actually known about the long-term effects.

Under the law, the Toxic Substances Control Act, the EPA is now responsible for improving our understanding of chemicals and are actually producing the effect of reducing risks that those particular chemicals may present over a number of years.

There are actually four main thrusts of TSCA.

One, to obtain better information with potential hazardous chemicals, to prevent problems through screening, as we discussed with you -- later or before -- actually give you a review of new chemicals prior to marketing, and the balance risks and benefits holds by hazardous

chemicals and also to coordinate the efforts at
L13 federal and state levels to control such hazards.

This undertaking, however, involves more than 30,000 industrial chemicals now in commerce and in fact the list that I believe is being put together right now contains closer to 40,000.

The Toxic Substances Control Act is directly -- mainly to the chemical and alloy products sector of the chemical industry. This sector produces basic chemicals and plastics. Its contribution to the national economy represents approximately six percent of our Gross National Product.

Pesticides, drugs, and food additives are currently regulated under other laws.

In addition to the chemicals and alloy products sector, a substantial portion of the chemical process industries will be affected by this legislation.

How will the Toxic Substances Control Act help us to learn about the vast numbers of chemicals entering our environment each day?

First, the EPA may require a

manufacturer to actually report about the chemicals he produces, their uses, and their many by-products or mixtures, catalysts; discharged into the environment.

L14

Also, EPA may request information concerning health and environmental effects of those chemicals.

For example, such information should be used in tracing the sources of chemicals that poisoned this actual seagull.

As you remember, there were a couple of publications that came out where seagulls were running in the thousand part-per-million range, for example, for PCB's.

Until recent years, most testing done by the chemical industry itself has been directed to the short-term effects of chemicals -- such as inflammability and explosiveness.

However, under the Toxic Substances Control Act, EPA may require testing to determine their unknown long-term effects or their chronic effects.

New testing methods promise to reduce significantly the time and resources required.

Short-term inexpensive tests using bacteria are available, for example -- investigate some of the mutagenic changes in cells that actually may be linked to cancer.

As we continue to be surrounded by plastics and other chemical products, such testing information is important to insure that we are not unwittingly breathing or wearing, eating, or touching harmful chemicals.

Under the Act, EPA may require manufacturers to bear the cost of testing those products.

For many years, as I am sure you are aware, the Reserve Mining Company at Silver Bay, Minnesota has dumped 67,000 tons per day of tailings containing asbestos fibers into Lake Superior, contaminating the actual drinking water in neighboring communities.

Breathing asbestos fibers has long been known to cause lung cancer, synergistically with other components added.

What are the effects when we drink water containing asbestos fibers?

Under the Act, EPA could require manufacturers of asbestos to bear the cost of testing to determine the health effects of ingesting various levels of these actual fibers.

If test data and other information indicate a chemical is endangering our health or the environmental, what control authority does EPA have under the Act?

The most extreme action that EPA could take under the legislation would be to prohibit the manufacture or import of a chemical altogether.

Alternatively, though, the EPA could limit the chemical's use.

An extremely hazardous chemical could be restricted to producing other chemicals in enclosed systems or kettles, in this case.

EPA could require appropriate labeling to warn of their hazards associated with a particular chemical and to indicate how to handle that particular chemical more carefully or safely.

If appropriate, EPA could require a proper disposal of a chemical.

Finally, if a chemical contains

a hazardous contaminant as a result of a certain manufacturing process, EPA could require a manufacturer to change his processes to avoid such contamination.

Thus, under the Toxic Substances Control Act, it would authorize EPA to prohibit the manufacture or importation of a chemical; limit its uses; require appropriate labeling or disposal; and control for contaminants by requiring necessary process changes.

Further, EPA will be working closely with those responsible for regulation of various other aspects of chemical problems.

Other laws are concerned with environmental contamination, occupational exposure, consumer use, and transportation.

This information available under the Act may frequently help support regulation of these other regulatory mechanisms.

And I think that you would find them quite useful in working with OSHA.

For example, testing data submitted to EPA under its Toxic Substances Act may

indicate that a chemical pollutant is causing
L18 damage to fish and should be regulated under the Federal Water Pollution Act rather than using TSCA.

Epidermalogical studies of people living in the neighborhood of a chemical plant might suggest that air emissions escaping for a plant are causing respiratory problems and that the authority of the Clean Air Act should be used to curb such emissions.

Further, medical records kept by plant physicians may uncover and recognize neurological effects of a chemical and warrant worker exposure standards under the Occupational Safety and Health Act.

The new law takes a preventive approach to a new chemical problem -- manufacturers of new chemicals must report 90 days before marketing.

EPA will review information about the chemical -- its projected production and use, and any test data developed, and will have the opportunity to identify those chemicals which could cause serious harm if manufactered and

used without restriction.

19 It was not until after tens of millions of pounds of PCB's were produced and released into the environment that scientists realized how persistent this chemical was and how toxic it is to fish and man.

Over the past few years, we have been -- become increasingly concerned and found that PCB's find their way into the human body and adipose tissue, and also -- even in the milk of nursing mothers.

Despite restrictions taken during the early seventies by the industry to reduce production and limit to closed-system use, in quotes, the electrical equipment described in this transformer is still filled with as purely are PCB's.

High levels of PCB's continued to persist -- having been used in many cases in paints, inks, in the actual micro-capsules of carbonless carbon paper, in plastics and in other uses.

In the Great Lakes, nearly

two-hundred millions dollars were spent to destroy the fish-killing lamprey and the restocking of the Lakes. Because of PCB contamination, this major investment may be wasted.

Other PCB's have been found in sewage sludge -- the parents of this little girl unknowingly spread PCB-contaminated sludge on their farm land.

This, as you know, is a farm owned by the Nahrigs in Indiana.

Shortly after this picture was taken, relatively high levels of PCB's were found in milk from their cow, Blossoms.

While the PCB experience has been extremely costly, and a tragic one, we should now be alert to any other new similar compounds -- for example, had the Toxic Substances Control Act been in effect in 1970, when a close relative of PCB's, the polybrominated biphenyls was first produced, the accidental contamination of hundreds and thousands of Michigan cattle may have been prevented.

Under the Act, EPA will be able to review proposed significant uses of new chemical

substances.

21 For example, the use of asbestos as a spray insulation has been abandoned after breathing asbestos particles was found to cause lung cancer.

However, the unique properties of asbestos still make it attractive to the industry.

Any proposed new use of asbestos and of other chemical substances identified by EPA will be carefully reviewed in advance.

Once a chemical is widely used, and economically important, the benefits of a chemical measured in dollars and jobs may be substantial.

For many of the chemicals, EPA will regulate the risks, will not be nearly as easy a measure.

For example, no one has been able to quantify the damage done to marine life as a result of the 265 gallons of PCB's spilled in Seattle.

This, as you know, is called the famous Duwamish incident."

With today's sophisticated laboratory techniques, many aspects of the environmental behavior, and health effects of chemicals may be studied.

But for the majority of chemical substances, precise predictions of such behavior outside the laboratory are beyond our present knowledge of the interaction and effects of chemicals in the environment.

In making regulatory decisions under the Toxic Substances Control Act, EPA will balance unquantifiable risks such as the risk that a chemical causes cancer cells in man twenty years from now, with the benefits derived from that actual chemical.

Such decisions will be greatly enhanced by the participation of a well-informed public.

A public which is concerned about alternatives to suffering from emphysema and other afflictions, a public which feels testing for genetic effects would be performed in a laboratory and not haphazardly in the environment

where the public may be threatened and by
L23 distorted birth defects.

And a public which is disturbed about a growing list of chemicals found in our foods such as DDT's, PCB'S, PPB's, hexachoric benzene, and other toxic substances.

As recognized by the former Chairman of Dow Chemical Company, industry has proven its ability to tackle many problems and actually come out ahead.

Only with the cooperation of industry whose experts are intimately familiar with the problems and the production and the actual use of those chemicals will we be able to reduce the risks of those particular chemicals.

In the coming years, we will undoubtably uncover more and more linkages between chemicals and health and ecological problems.

The health and welfare of future generations will depend on how we approach the problem of hazardous materials.

Not only government and chemical industry officials will be involved, but citizens who are aware and concerned as you are this evening.

While we cannot hope to insure a completely safe or a risk-free world, there are many sensible steps which we can take together. Thank you.

HEARING OFFICER BOTTS: Thank you, Karl.

(Applause.)

HEARING OFFICER BOTTS: I apologize for not having introduced Karl before.

I didn't realize he was going to present the slide show in person.

I think we can take a few minutes now, if there are questions that people want to ask about the Act itself, we do have copies of the law on the table available out there -- as well as other -- some of the things I mentioned earlier interpret the law or information about it.

Are there any questions that anyone has about the law itself?

A VOICE: Will that 90-day premarketing time be enough to do anything about it -- so many things get lost in that time.

Will that be enough to really stop something?

HEARING OFFICER BOTTS: The question is, will the 90-day -- period for the premarket notification be enough?

Karl, do you want to answer?

MR. BREMER: I would hope so.

One other problem that we come into, I think on a number of implementation documents, for example, and I am sure that David Koenig could comment on that, too.

There have been a number of these floating implementation things that have been written up and they have been circulated and people haven't received them on time and they wouldn't have sufficient time to comment on them so it is an example of what you are talking about and I would hope that that 90-day notification would be enough. If not, it would have to be extended.

HEARING OFFICER BOTTS: Are there any other specific questions about the law itself -- before we move to the movie?

There will be an opportunity to ask questions later as they come up. If you don't have a question right now there will be a chance

to ask it later.

L26

Let's go on with the movie now, entitled "Can We Fish Again".

(WHEREUPON, a movie was shown.)

HEARING OFFICER BOTTS: There were some people who attended the meeting today who thought that this movie was in -- quote "inflammatory", and that EPA shouldn't have made a movie like this.

But I don't think very many people think that we can go on longer kidding ourselves about the nature of the problem that we have to deal with --

I would like to ask the panelists to come up here now.

We have asked several persons who have a concern with the problem of toxic substances to tell you a little bit about what their concerns are tonight.

Can you come up? Take your place.

And then, after they make a very brief statement they will stay up here so that, as you ask questions, I hope you do have questions to ask today, and persons from the EPA and we have also represented the Food and Drug Administration, will

try to answer your questions.

But, as the movie says, we don't have all the answers.

The problem we face now as a government agency is figuring out how to get those answers and figuring out whether we are going to have enough people to do all that testing and review all those reports.

The first person I am going to ask to speak on the panel tonight is Dr. Samuel Epstein who is now at the School of Public Health here in Chicago at the University of Illinois.

Dr. Epstein has been concerned professionally about the problem of toxic substances for some time. In fact, he helped write the Toxic Substances Act.

Dr. Epstein, will you tell us your views about this problem.

DR. EPSTEIN: Ladies and gentlemen, as a newcomer to the city, I am delighted to be here with you this evening to share some thoughts on Toxic Substances Legislation.

I have lived with this particular

legislation for some time -- in fact, in 1970,
L28 I presented the first draft of it for the same Committee of Public Works, and the legislation was then subsequently passed over to the Senate Commerce Committee and House Commerce Committee.

In the ensuing six or seven years, this legislation has been effectively blocked by a massive lobbying of the chemical industry -- particularly the Manufacturing Chemists Association, and industries such as Dow Chemical Company.

And we have them to thank for the fact that it has taken us some six years since the initial -- initiation of this concept to allow that we have such legislation.

Now while I am delighted that we do have legislation, I think it is important to bear in mind that there are very significant deficiencies which in all likelihood will result in the impact of the legislation being trivial, if not negligiable.

Now, I say these words in a very considered frame of mind having heard what Dr. Bremer said this evening, and I agree with him

as an idealized statement of the situation.

I think Dr. Bremer's picture is something which we hope we will move forward to in the future.

But let me try to give you a few of the facts which may help to put the matter in a somewhat different perspective.

Before giving you some of the pessimistic realities involved, let me touch on one or two aspects of Toxic Substances Legislation which I think make it in principle unique legislation.

For the first time in the history of legislation in this country, the onus or the burden of proof has been shifted away from the government to industry.

The Clean Air Act and the Drinking Water Act and the onus was on the government.

When I say government, you and I as taxpayers to produce the information on the basis of which it was possible to develop regulatory standards.

So for the first time now, the onus has been shifted from the taxpayer and the

government to industry.

L30 The second point about Toxic Substance Legislation is that it is multi-media in its approach. It covers air, water, the total environment, as opposed to previous legislation which covers either legislation directed towards a particular product on the one hand, or to particular segments of the environment such as air and water.

There are various aspects of the Toxic Substances Legislation which in principle are unique such as the -- the screening and the premarket testing, and the whole concept that in principle chemicals should be tested before introduction into the environment.

Now, let us still consider the idealized situation.

Now the Administrator of the EPA has a period of 90 days in which he can react following notification by industry -- that they are proposing to introduce a new chemical into commerce or alternatively, that they are proposing to use an existing chemical in different ways.

So the administrator does have

very poor discretionary powers.

Now, the Administrator, like all of us, is subject to pressures in life and the likelihood is the most organized and the most coherent form of pressure will come from the industrial lobby.

So, for the Administrator to exercise discretion, it is important for him to be the recipient of balancing pressures.

Now, in the past, balancing pressures have not been the for market of decision making.

The administrators of agencies and senior officials of agencies have responded unduly to pressures from industry because there hasn't been balancing pressures from consumers -- citizen groups.

And there is no reason to suspect that the Administrator of the EPA will be able to exercise his discretion appropriately in the absence of balancing pressures systems for singular groups.

One of those singular deficiencies in Toxic Substances Legislation is that although

there are suggested guidelines as to how to test chemicals in biological systems for effects such as cancer, birth defects, there are no suggestions of guidelines whatsoever for environmental testing -- in other words, for testing of fish or wildlife.

L32

The reason for this is that in principle the environmental groups in this country, with one or two notable test exceptions have shown a total lack of interest in this legislation. And, therefore, EPA has not, and therefore in the Act, there has been no input for all intents and purposes on the methodologies and the approach for testing for effects of chemicals on fish and wildlife.

And this is another very, very important gap -- which citizen, consumer and environmental groups should try to apply.

The next limitation is the fact that the amount of money which Congress has allotted to the Act is such as to make it impossible for EPA to do anything serious about it, and let me -- be very specific.

In the first year of the Act, ten million dollars had been allotted to the legislation

rising to seventeen million dollars over three years.

L33 My personal estimates were that for minimal operation one would require somewhere in the region of one hundred and fifty million dollars to start off with.

Let me remind you in 1970 when the Clear Air Act got off the ground, Congress allocated four hundred and forty million bucks for the first year of the Clean Air Act.

The EPA, for pesticides alone, which is one small fraction of the total -- chemicals, rather, is forty million dollars.

So, for all intents and purposes, I think it is fair to say that with a budget of ten million rising to seventeen million, it is unlikely that EPA can do anything significant, and serious -- and I say this very advisedly. I am a member of EPA Advisory Committees, I have kept track -- a very close watch for EPA in their own Office of Toxic Substances, and I just don't think it is going to be possible for EPA to do anything serious in this connection which makes all the more important for citizen consumer groups to exercise appropriate pressure on their legislature

to have more significant and agreeable funding.

L34

A second -- another deficiency in the legislation is the fact that there is a specific exclusion on export.

And let me tell you what has been happening in this country in the last few years with the toxic chemicals.

For those few toxic chemicals which by dint of blood, sweat or tears managed to get cancelled or suspended or otherwise shelved, what happens? The industry concerned does not cease production, not on your life.

In some instances it increases production and ships abroad. This has happened with water in deoderant chloride and chlorine heptachlor, with every major category of chemicals whose use has been restricted in this country.

The industry, usually in conjunction with the AID, the Agency for International Development, sometimes with the cooperation of the government, ships, moves the stuff abroad.

Well, you might say; well, you know, the natives of Brazil, the people of Yugoslavia, it is not really our concern -- that is a viewpoint,

you know, we won't argue, but let us assume that they are not concerned with what happens abroad because they show general concerns about the people, and which is understandable.

The fact is the world is a very small place and what is manufactured in Brazil today will reach America tomorrow.

Let me also tell you that the chemical industry is moving lock, stock and barrel much of its production movements abroad -- plastic units going to Yugoslavia, asbestos going to Brazil, there is a streaming out of this country of toxic chemicals abroad -- now this means two things. One, to the atmosphere, the environment is going to become progressively contaminated with the migration of toxic chemicals which eventually will reach the States.

Secondly, and equally importantly, there are very serious unemployment problems in this country. If indeed we allow industry to escape its responsibilities and to enjoy tax advantages at the same time.

So these are some areas.

Now, let us assume that we were

serious about Toxic Substance Legislation,
L36 which we are not, because we are only getting
ten million dollars for the knocking, but let
us assume -- then it is clear that we need
massive citizen-consumer pressure on the
Legislature to dissolve more significant and
realistic approaches in terms of overcoming
the fiscal, the problems in terms of the
international approaches and in terms of some
of these other matters, particularly environmental
testing.

Let me just now turn to problems
of cost, the cost of such legislation.

Now, in the last six years,
the major work mechanism whereby the Manufacturing
Chemists Association and other elements of industry
very successfully blocked this legislation have --
highly distorted, exaggerated claims on the cost
of such legislation.

Now, let me tell you how this is
done and has a particular game plan to it.

Let us say that an agency wants
to develop standards to control a particular chemical.

The industry concerned gets

L37

frightfully upset and says, "Now look, it is going to cost the country a lot of money." So it goes to a commercial testing house such as Arthur D. Little or Foster D. Snell, and say, "Do an economic impact statement for us." In other words, find out how much it will cost the country and let us give you a specific example.

Now, in '74, when we were trying to develop one-half a million samples of biochloride in the work place, assigned to the plastics industry, went to Foster D. Snell and Arthur D. Little and said, "Let's have it, let's have an economic impact analysis of what would happen if we have one half million biochlorides --

(WHEREUPON, the court reporter requested the speaker to slow down.)

DR. EPSTEIN: One part per million doesn't sound terribly harsh, but one part per million of biochloride which is 2,690 micrograms per cubic meter and in fact can produce cancers in animals even with a very, very small amount of animals used in these kinds

of tests, cancers can be provided and cancers can be produced in animals with parts of vinylchloride.

But let's get back to our major item.

It is going to cost the country 68 million dollars and 1.3 million people will lose their jobs.

Now, in 1974, that was mighty powerful talk. The idea that 68 million dollars was going to be lost and under those circumstances, you or I or we or some people will say, "Well now look, it is true that some people are going to die from vinylchloride, we are going to have some birth defects and cancers and this or that, but you know, the country has got to survive, we need the money."

However, let me assure you that these claims were fraudulent and exaggerated -- let me be specific about this.

B.F. Goodrich, the largest manufacturer of PCB, came into compliance for a total cost of 35 million dollars. B.F. Goodrich is not making money by meeting its compliance

technology.

L39 Union Carbide, which was one of the biggest industries that was fighting the one-half million standard at the same time it was fighting one-half million standard, economists and engineers at Union Carbide had produced documentation which showed that if they had the one-half million standard, Union Carbide would make money, not lose money, because they would recover and recycle the vinylchloride that was previously committed to the outside environment.

Now, this is the familiar pattern. Any attempt to regulate is met with distorted and exaggerated claims of economic impact.

Now, these claims are not only economically distorted with relation to the cost of, cattle cost [sic] of industry, but they ignore the externalized or discounted costs. Let me explain what I mean by "externalized" or "discounted cost".

Annual costs of cancer for every year in this country total 370,000 people who die of cancer, equal about 18 million dollars. This is based on the total direct and indirect

costs and these are HEW estimates.

L40

Allowing for the fact that 70 to 90 percent of cancers are environment in origin and hence preventable, one could say that ordinarily a chemically induced cancer probably comes to about 14 billion dollars per annum.

The cost of one child say with central nervous system injury from lead poisoning alone based on remedial and custodial care and excluding deprivation of earnings is about $400,000.

Such public health costs are always discounted or ignored or not taken into account in the economic impact analyses of the proposed regulations.

Now, let's see what happened with the Toxic Substances Legislation.

Industry claimed that it was going to cost the country two billion dollars per annum.

EPA estimates were 18 billion dollars per annum, GAO estimates were 200 million dollars per annum.

200 million dollars per annum, incidently which I think is probably just about the

right figure, represents about .3 percent of
41 the total chemical sales of about 72 billion dollars per year -- which represents about 3.6 percent of the net profit after a 5.5 billion dollar taxation.

Now, I am going to come to the last point I want to make -- do I have a few more minutes? A couple more minutes?

HEARING OFFICER BOTTS: Yes.

DR. EPSTEIN: I want to make one more point before I go and that is the whole question of the data base, and this is perhaps the most serious.

What you have heard this evening and today implies that Environmental Protection Agency will be given some information on the basis of which it will be possible for the Agency to make reasonable judgments as to benefits and hazards.

In other words, it will be given the toxilogical information, it will be given the data of benefits and on the basis of this cost assets will be developed.

Now, let me refer you to -- first

of all, let me make a statement and then cease to substantiate this.

I merely make the statement which may sound rash, except I am not in the habit of making rash statements, otherwise I would have been sued for millions of dollars before on such a series -- let me make a statement that the data provided by industry in support of petitions for registrations of its products are suspect until proven otherwise.

In other words, there is an a priori presumption that data submitted by industry, developed either in-house by industry or developed for it by commercial testing houses, is inadequate for the development of valid inferences either because such data are fraud, inadequate, or not particularly useful or because they are alternatively manipulated or distorted.

Now, in January 22nd, 1976, Assistant Administrator Qualls and Commissioner Schneider appeared before the FDA and basically said what I just said now with relation to two or three -- Qualls said with relation to pesticides and Schneider said with relation to food additives.

L43

I have been involved in the major -- as expert witness for EPA, the major cancellations of DTO and dieldrin chloride and heptachlor, and in each of these instances, industry maintained on the basis of its data -- produced data to show that these compounds were safe and the data were accepted by the Agency.

Now when you look at the data very carefully, the data do purport to show a safety. But if you take the histological sections where the industry pathologists have said, "Well now look, these livers show nothing abnormal," and you look into these livers which industry thought there was nothing abnormal with them, and you examine them and you find cancers.

Now, this has been documented in detail. In fact, I have a prepared statement this evening which will give you the detailed references of this and this will be the subject of Congressional investigations.

Well, you may well say, "Well look, maybe it is an honest difference of opinion," a group of say maybe 20 outside pathologists have common knowledge in the area said there is nothing

the matter with it -- they are all cancers. The
44 industry people said they were all normal. However, quite apart from this remarkable coincident the fact is that in some instances we have been able to show that industry had its own records showing they were carcinogenic or produced cancers and supressed this information. In fact, at the present moment, some of you may know there is a criminal conspiracy charge that has been mounted in Chicago against one of the major pesticide companies and let me assure you that these have been the rule rather than the example.

Take for instance just one more as an example, the cyclamate literature.

You can divide cyclamate into two parts; one type of literature shows cyclamates are good for you, another part shows that cyclamates are bad for you.

Now by some very strange coincidence, the literature showing cyclamates are good for you is literature sponsored and paid for by whoever happens to be in-house, the commercial testing house. The literature showing cyclamates are bad for you are literatures sponsored by the Sugar

Foundation.

L45

The fact is this -- we cannot possibly allow industry to directly generate information in support of petitions for registration for xylenchlordans. There have to be mechanisms built-in which will allow the scientists doing this work to operate freely without constraint.

The situation is that a middle-aged scientist who is working in a commercial testing lab or working in industry, his life starts -- his future is built into all satisfying an industry need. This creates impossible constraints on the man and his family -- and we must accept this and this is a matter for which the record is abundantly proven.

So this is another very serious matter -- the solutions to this are both legislative and regulatory, but it is clearly important that the group that does the testing can under no circumstances be the group that is in direct recipient of funds from the industry.

Now, these are some of the issues which I would raise to you this evening.

I would like to leave you
246 with the very clear message that even although we do have legislation, this legislation is going to be meaningless in the absence of strong citizen and consumer and environmental monitoring and the understanding of the basic issues.

It is also very important for you as citizens if you are not technically qualified in any of these areas to have a strong sense of suspicion of scientific authority and a strong sense of confidence in your own instincts in the matter.

Thank you.

(Applause.)

HEARING OFFICER BOTTS: I guess we know which side he is on.

Our next panelist is also a doctor -- who has somewhat different responsibilities -- Dr. Frederick Ettner is in family practice on the North Side of Chicago, and in his daily work he is faced with the questions of how to protect his patients and what kind of advice to give to the mothers of the children that he sees every day

-- and Dr. Ettner is going to explain to you -- to us some of this concerns about the Toxic Substance question.

Dr. Ettner?

DR. ETTNER: Thank you, Lee, thank you for inviting me this evening.

I am a General Practioner, and as a new General Practioner, my concerns of overexposure to pollutants of the environment is not as a recent interest.

As an undergraduate at the University of Wisconsin, my major was field zoology, and I was part of the DDT hearings and investigations in Madison, Wisconsin, which resulted in eventual banning of DDT compounds.

However, as Dr. Epstein so eloquently stated, other compounds are still out in the markets -- whether they are being exported or actually being used as pesticides throughout our country.

It is my hope that these discussions at this meeting will result in enforced -- and I underline that -- regulations.

They are potentially toxic

substances.

48 The regulations will be brought against the polluter and the producer.

The PCB affair is following a very similar course to its cousin, DDT.

Concerned public outcry and regulation, but no real changes or controls on industrial production or stockpiling of potentially harmful toxics.

Although this Act, such as the Toxic Substances Act, appears to check production of these toxic substances, will it truly be enforced? And more importantly, will it control other toxic substances before 40 years have passed until anything is done about it?

This situation has led to scare headlines similar to those concerning DDT, PBB's, and other pollutants which label the concentration of PCB's in human milk as dangerous to mother and infant.

Studies have confirmed increased concentrations of PCB's in human milk, and some have concluded that the solution is to discontinue breast feeding.

The benefits of breast

L49 milk are well-known, immunilogic protection allergy protection, and of course, the immeasureable psychological well-being of both mother and infant.

It is my feeling and the feeling of organizations such as Le Leche International, which is the international breast-feeding organization, that the only choice in nursing an infant, any young child, is breast-feeding.

If one woman were to be discouraged from breast-feeding and one baby denied, these documented benefits of human milk would be a sure travesty.

Some scientists state, "Why not substitute formula?"

I can only state that the adverse effects of that alternative is worse, perhaps, than high concentrations of PCB's.

These adverse effects are well documented in the White Paper on Infant Feeding published by Citizens for Science in the Public Interest, Washington D.C.

Their work included noted pediatricians, psychologists, and nutritionists and

psychologists from around the country.

I fervently hope that EPA will regulate with a strong hand those in industry that violate this environmental act, and direct new legislation towards stronger controls against all toxic substances.

This Act really does need teeth to prevent future production and stockpiling of all potentially toxic substances which ultimately pollute and poision our water, fish, human and animal and eco-systems.

If industry can be pressured by us, the people, and perhaps our pressures on government regulation, to make it economically profitable to clean up its act can mean we can breathe and live free from toxic chemicals.

I want to close with a model situation -- that government and industry should be intimately a part of that of the commercial jet pilot whose actions or inactions are an intimate part of his own life and death as well as those of his passengers.

I hope this model can be applied. It it a necessity and it will insure

safeguards on all our health.

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Thank you.

(Applause.)

HEARING OFFICER BOTTS: Thank you, Dr. Ettner.

Our third panelist is one who's facing up to the toxic substances in a different way. She is an active consumer activist -- an active environmentalist.

She had training in human ecology and she now mostly prefers to call herself a mother.

Dorothy Werner?

MRS. WERNER: Well, when I was invited to come here tonight I thought, "Good grief, all these experts, and they want me to come up and say something. What in the world would I have to say?"

And I thought -- "Well, I will get up and I will tell everybody exactly how I feel about the issue." Because it is important that the EPA know how ordinary people are feeling.

When I came here this afternoon to listen, I came here with a lot of fears. I was really scared. I have been scared for this

country, for my own body, for my kids, for
the environment, for so damn many things,
pardon me, for so long -- and I was hoping,
maybe here is something that will help.

I started being worried when I wrote a paper in undergraduate school on striking ninety. Now that is a long time ago.

Then I wrote a paper as an undergraduate on detergent pollution. That wasn't quite as long ago.

Now, I have a nursing child, and I am hearing about PCB's and that is right now.

So when I came I had a lot of fears to tell you about. And -- but right now what I am really feeling is anger.

I am really, really angry that the people that just all of us can't get ourselves together to do something substantive about this issue.

We have so many organizations, and bureaucracies and so on that are dealing with our lives.

Industry is invading my privacy.

This is supposed to be a free country. This is

L53. not a free country. I am -- I am -- bombarded every day by things that I must take in to my body -- okay? All kinds of things.

This Act is a step, a very tiny step in the direction of preventing any more of these things from coming at me -- and you.

But, if we don't make sure that the Legislature funds this Act adequately, it is not going to do us any good to have it.

It is going to be another token thing.

We have seen a lot of them and we are going to see some more of them, I am sure.

Section 28 of this Act provides for a hundred and -- one and a half billion dollars to be distributed to the states to help implement this Act.

As Dr. Ettner mentioned, you know, when we were sitting outside talking before the session this evening, that would just about pay for the stationery that would be necessary to really implement this Act.

And some of the rest of us have

just plain got to get mad and do something.

L54 I have so many other things that I want to say and I am so angry that I can't say them and I am going to sit down.

HEARING OFFICER BOTTS: Okay, thank you.

(Applause.)

HEARING OFFICER BOTTS: Karl Bremer, you already met.

He presented the slide show in the beginning. He has recently been appointed as Coordinator for the Regional Office of the Environmental Protection Agency in our efforts to carry out the responsibilities of the Environmental Protection Agency under the Act.

We do have representatives of industry -- I believe in the room -- some of the men who attended the sessions during the day today, and I would just like to give you one example of the kind of problem that industry faces under this Act that relates to some of the things that have been said here tonight.

I did not know that the panelists were going to focus attention on the funding under

the Act, but it came up during the daytime
L55 sessions, too, when there was discussion of how EPA would make available to industry the inventory or the list of chemicals that would be covered under this Act.

And an estimate has been made that that inventory or list will be 1500 pages long.

In order to publish that list in the Federal Register, the EPA would have to pay about $250,000 out of the money that we have to care -- to work on the Toxic Substances Act.

The Agency does not know, at present, how you are going to make that list available to all the industries who will need it before they can do the things that they are supposed to do under the Act.

I am just trying to make the point that there are a lot of different people, and institutions that have responsibilities under the Act.

We don't know how to solve all of these problems as yet.

Karl, do you want to make any response to any of the things that have been said about -- by the panelists about the Act before we open it up to the questions from the floor?

MR. BREMER: Not really, Lee.

Just -- I could comment on what you just said on that.

I am not -- I am not that concerned about the list -- of these compounds getting out. There is -- it was kind of surprising this morning or -- this afternoon, that there is some kind of fuss made about how much we would have to pay to put that list on the Register and so forth.

The list has already been compiled and it involved the Chemical Abstract Listing, and also a listing from the Bureau of Mines which includes a number of -- you know, the inorganic compounds.

The list has been prepared, and it will be published and distributed.

And I, you know, we may miss some people when it goes out, but I don't know why that

problem came up, you know, so many dollars to put out a list or whatever it is -- it is minimal compared to what is going to have to be done to implement the Act.

HEARING OFFICER BOTTS: Okay.

MR. BREMER: I would happy to take any questions that --

HEARING OFFICER BOTTS: There is one other person sitting at the table up here.

Judy Moor from the Food and Drug Administration.

She, I don't think you want to make statement.

We invited her here tonight because we thought there might be questions that would come up about food additives.

One of the features of the Toxic Substances Act is that it is intended to give the government authority to act in situations that are not covered by already existing legislation -- that is some kinds of situations involving toxic materials are covered by the Clean Air Act.

Some are covered by the Federal Water Pollution Control Act.

Some are covered by

58 responsibilities that the Food and Drug Administration already has.

EPA is not supposed to assume those responsibilities under -- under the Toxic Substances Act.

I think it is time to ask whether there are any questions or comments that people from the floor would like to make.

We do have a representative of the Le Leche League who informed us that she has a statement that she would like to make.

Would you like to make that now? She is sitting right there. She says it is very short. Yes.

MRS. BOTON: I am Anna May Boton from Elmhurst, Illinois. I am a mother, and I am representing Le Leche.

Le Leche is a Spanish word that means "milk".

Le Leche was founded in 1956 in Franklin Park, Illinois, for the purpose of helping mothers breast-feed their children.

Le Leche now reaches about a

L59

million persons each year with over 3,000 groups, primarily in the United States, but scattered all over the country --

The Founding Fathers who wrote our United States Constitution specified certain inalienable rights.

I don't think they considered some simply because it didn't occur to them.

Those inalienable rights are to clean air to breathe and clean water to drink.

Our environment has been contaminated and now polychlorinated biphenyls have been found in mother's milk.

An even more basic right is for the baby to nurse at the mother's breast on uncontaminated food.

I speak to you on behalf of thousands of mothers in the United States, scientific research as Dr. Ettner had pointed out shows that the benefits of breast feeding are pyschological, emotional, immunity factors that fit a number of viruses and bacteria -- the foreign boroteen [phonetic] in cow's milk that can cause allergies, anemia, digestive upsets; nutritionally

L60 speaking, breast milk is the most perfect food for babies.

Thousands of mothers want to offer their babies this very best food.

I am sure. Our children were all breast-fed.

Can you imagine anything more distressing to think that these babies or any precious child, for that matter, has been given contaminated milk? And these contaminants are everywhere in the atmosphere.

We want polychloronated biphenyls removed from our atmosphere.

Recent scare headlines have read "Mothers Must Wean Their Babies."

These newspaper headlines should have read "PCB's Must Be Removed from Our Environment." Our children are this nation's most precious resource.

(Applause.)

HEARING OFFICER BOTTS: I think this gentleman over here has a question.

I would like to ask the people who speak to please state your name and spell it

please, so that the court reporter can identify
61 you. Otherwise we have a lot of anonymous statements in our hearing records.

MR. POST: The name is Howard Post, P-o-s-t.

I was very pleased that Dr. Epstein reported that medical doctors were in a group that could be bought.

Dr. Epstein, you are in this group?

DR. EPSTEIN: A medical doctor.

MR. POST: You stated medical doctors could be bought?

What are we in industry going to do when we are required to go out and find solutions to problems, to what doctors do we go?

DR. EPSTEIN: Your question is very reasonable, indeed, and I am glad to have an opportunity of responding.

I think that any scientist or physician put in situations of constraint will respond in a predictable fashion to its constraints and when he does, the damage is as great to not only himself, but also to the industry and the whole

,62 society.

We have seen so many examples in the last ten, fifteen years, in which scientists working for commercial testing houses or in industry have -- a list, now this is a matter of record, have falsified or manipulated or distorted information. And I don't think it is necessary to dwell on this.

I think, as your question implies, the more important issue is how can we achieve modification about our future to make sure this doesn't happen?

Let me give you an indication as to how this can be done.

Under the present circumstances, when a chemical industry wants a product to be tested, contrary to the American ethos in which normally you request bids in the urban market, the president of the company will get on the phone to a commercial testing house and say, "I want this compound for its testing force. Would you -- "

That is the standard procedure, or it seems to me that the testing would be done

in-house.

L63 Now, the firm that does the testing, the commercial firm that does the testing wants to get more business, and is anxious to please the company and it will in one series of ways in which I can go into detail with you -- produce the information consistent with the marketing interests of industry.

And this is how the problem comes about.

Now -- let us examine how we can make a minor modification of the industry.

See, to protect industry, because it isn't a question of industry versus society, we are all in it together, and when one industry, when we have to withdraw a compound from the market, an industry loses three or four hundred million dollars, that is a loss to society. It isn't just a personal loss to that industry, it is a loss to our total economic fabric.

Now -- there are various methods by which this can be done.

Senator Nelson, in particular, has been interested in the whole concept of third party testing.

That is in which the government undertakes the responsibility for testing of products, and these products are -- the costs of the products are borne by the industry.

Now, there are also advantages and certain disadvantages of the effect.

Now, the group that does the testing would in fact have no economic interest. However, you only have to examine some of the terrible fiascos of the FDA and I could go into great detail in these -- and to examine what has happened, not to have a high degree of confidence in the ability of a bureaucratic agency to conduct the testing, and therefore, for this reason, there is some skepticism at this simply as to whether third party testing is the correct approach.

Now, let me offer you a concept which is called, "The Buffer" or "The Barrier" testing concept, which employs the best cities in the capitalist ethos, and removes the constraints from the system. Now we go as follows:

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Let us say you, as the president of a company, have seriously considered a product, you have got it in the early hour stages, and you think this is an important, useful product to society. And you want to get it on the market.

Now, you are anxious that the material be tested and tested properly, and decently, and once it is tested, that you should not be -- that you should not be in an open-ended situation in which you can go on testing and testing year after year.

You would like to know what your commitment is and when your commitment has been made you want to know when you can go on the market. That is what you want to know, that is what you are entitled to know.

Now, we suggest the following -- you go into an intermediate buffer group, which is the proper representatives of industry, of the Agency, of government, and citizens of public interest groups.

You say to them, "Look I am president of this company. I want to know whether

we should -- whether my company should go ahead with this product."

66 And they say, "Right, we will take it over for you."

So, this is the intermediary buffer group -- advertises for bids in Commerce Daily News, that is in the open press. It says, "Anybody who wants to come and do the testing can submit a bid." And then bids are awarded on the basis of protocol, of the quality of the protocol, and economics, fine.

So then the bid may be given to a university or to a commercial contractor or to another industry. It doesn't matter. Anybody who is offered says they're going to do a good job, and gives a good protocol and says, "It is not going to cost a fortune," it will be given the bid.

The group that does the testing perhaps should post a bond in case they do a sloppy job, that they should repeat it -- repeat the test at their own expense rather than making you pay for the testing -- okay?

So this university group or

industry group starts the testing or commercial
67 contractor perhaps starts the testing and every six months or so the Agency with responsibility in the area or the National Cancer Institute or National Institutes of Health can send out a project scienteeto see how the work is being done and monitor the progress of the work.

Now, at the end of two or three years, one of three things will happen.

The data which the group has generated can be good, which is one possibility. It can show the product is unequivocally harmful or unequivocally safe, as far as the tests go.

Fine, and then the Agency, and then this intermediary buffer group will report back to the Agency and the Agency will make a recommendation of which you will then be in a position to decide what to do.

The next possibility is that the results of the test may be botched. The people who do the testing may have done a sloppy job, and I can assure you this is very common.

Let me give you one example of 17 tests on DDT which we reviewed to the Commission

on Pesticides.

All of which these tests have been paid for by industry.

40 of these tests were so lousy that we just couldn't develop any instances at all.

Now, that is the industry's money that was wasted -- and industry went in good faith, in some instances. Well, if the tests are botched, then the group that responded to the bid may be forced to repeat because they posted a bond.

The third possibility may be that the data are truly unequivocal.

Once in a while it happens you do a test and the data are equivocal.

You don't know where to go.

Now, under these circumstances, one would sayd, "Right, industry has fulfilled the responsibility, it has paid for the tests, it is having to arrange to have the tests done by groups under constraint. The testing group has achieved its responsibility."

This is the situation in which the Agency with responsibilities in the error should pick up the tab.

Now, I think that the kind

L69 of instance where you have really equivocal data will be fairly intrigued, especially if the Agency concerned sends monitors and inspectors down to monitor the purpose.

I can assure you that under these circumstances, when you get data indicating the product is safe or harmful, you will then be in a position to be able to make reasonable, long-term judgments and one could add an extra caveat to this that if you, on the basis of these tests that have been done in good faith, in the buffer system, in which there is no economic linkage between you and the testors, if you do this and you market the product and then five or ten years later a problem happens that you should be in principle absolved from responsibilty and that would be my view.

That provided industry has achieved, has paid for the necessary testing, and this testing has been done, and under conditions of absence of constraint, that the industry has achieved everything which you can ask for it and that industry should not be expected to be an

open-ended situation.

70 Now, I think this is really the reason why -- it is not I who should be making the plea for this buffer system -- it is the industry, because industry has lost -- vast fortunes of money because of sloppy, inefficient, manipulated, distorted data and it is time that industry took the time to say, "Enough".

You wouldn't dream of operating your engineering shop in the way that toxicology and the testing procedures have operated. You wouldn't dream of it.

You would be out of business.

But on the other hand, you are accepting the viewpoint of people whose economic direct and indirect interests are linked with providing you with the information which they think are going to please you.

Now, this, the evidence in this manipulation and distortion, I assure you, is really a matter of record.

It can be documented in detail.

Name a food additive, a pesticide,

a feed additive, a detergent, and it is a matter of record.

So, this really the reason why I am delighted you asked me this question, and you have every right to ask this question, and I hope I will have been responsive.

HEARING OFFICER BOTTS: Do you have a comment, Mr. Post?

MR. POST: No, I don't think you are entirely responsive, Doctor.

Why shift the burden to the chemical profession? Why not the medical profession to set themselves straight? Why not get the medical profession to get off of the dollar?

You give me my opinion that I am asking for that I am paying for -- I am asking for an honest opinion, I don't want to buy the opinion, but medical profession cannot give it to me.

DR. EPSTEIN: Let me comment very briefly.

In fact, it is not the medical profession that has very much to do with this testing.

Most of the testing is done

by toxicologists and biologists.

L72 The world of physicians in this country, and these test procedures is very limited.

I am perfectly happy to change the reference of framework of the discussion, but I was under the impression this evening, we wanted to talked about Toxic Substances Legislation.

If you want to talk about problems of insurance -- insurance or incompetence in the medical profession, these are valid topics, and I'm happy in my limited basic information, to discuss these with you, but I don't think they are relevant to this evening's discussions.

HEARING OFFICER BOTTS: I won't.

If there is anyone else who would like to comment on this point or has another question they would like to ask, would you please come to the microphone so that we can all here you, sir?

Please tell us your name so we can identify you.

MR. DENSLOW: My name is Victor Denslow.

It is after 5:00 o'clock,

L73 so I am Citizen Denslow at this point.

HEARING OFFICER BOTTS: That is sort of an "in joke".

We had an EPA employee this afternoon who said it was after his quitting time, so he said he was going to speak as a private citizen.

MR. DENSLOW: Well, even though this is evening, though I am in industry, it is very obvious, Dr. Epstein, you are on your own and we accept that and understand it.

You made quite a number of comments there -- about industry, though, and a few of them that I happen to know about I would like to comment on because I think some of your information perhaps was not complete run, not knowledgeable, in the factors inherent in it.

You commented about -- let me put my glasses on to read my notes, excuse me.

You commented about, for example, the economic studies on the PCB's, about the one part-per-million.

We must clear that point up.

L74 At the time that economic study was done, I believe it was by Foster D. Snell, as you said, the EPA, and I believe OSHA also were proposing zero parts-per-million exposure and zero parts in the air.

At that time, it was when the study was made -- later -- the agencies raised the limit to one part-per-million. And I can assure anyone that one part-per-million is a lot different from zero parts-per-million.

So, I would like you to carry that in your mind. I am quite familiar with that situation.

Another point that not only you, but others have -- I think misquoted and misinterpreted, oh, all for the last year when this Act was going through Congress, is the statement that I think somewhere around 70 to 90 percent of all cancers are caused by -- and the quotes have been both ways -- environmental factors, and other times quoted as environmental chemicals.

And usually the inference has

been environmental chemicals.

I got ahold of the original article from the World Health Organization where these quotes originated.

The article itself does say that some 70, 80, 90, whatever the range there of cancer is caused by environmental factors.

Then they go on to describe what they mean.

In that classification they include smoking, they include ultraviolet light, skin cancer; they include what they generally call "food and diet-type cancer". And in that connection, I might add that much of this is in the natural foods.

I won't go into great detail, they did find examples in Japan where their particular diets -- somewhere in Africa with their diets versus the United States.

There was quite a definable incidence of cancer.

So, defining that a little further, with toxicologists and medical people and so on, the best estimates were that somewhere

below one percent, up to maybe fifteen percent
L76 of cancers were caused by what we would term "industrial chemicals" -- say the atmosphere and our foods and wherever.

One John Weisberger -- you may know, from is it the American Health Institute, I believe, up in the East, said his estimate was that perhaps there were something like 9,000 cases of cancer from industrial or chemical-type exposures.

And when he put that against the total number of cancers, it came out something less than one percent.

So, anyhow, I would just like to straighten out, for the record, that the original article and other evidence does not support this statement at all; that 70 to 80 percent of cancers are caused by industrial chemicals.

In regard to this testing business, I think you might have a point there about trying to get some better reliability of the testing and so on.

I happen to have been involved with -- some of these tests.

L77

Our company has been bid into on the committees where we shared the work.

And I must strongly say that I have never seen any instance of trying to rig a test, bias it in any way with these contract labs.

We do know there have been problems. I think the reference you talked about -- one of the government agents with FDA or whoever did find some labs that come up with a poor data or false data.

I saw a news release on it that is to the extent of my knowledge.

I think it was also an instance where on of the chiefs of the National Cancer Institute or whoever -- he himself was accused of improperly interpreting some data and bringing it in.

So, that perhaps is a problem there and I think maybe we should go at it, but I will strongly deny that in my experience there has been any rigging of the data by industry.

Oh yes, I guess the other point

right along there, if industry cannot be trusted to roll up their own data, who would do it?

78 Maybe we would all be happy to have the government do it.

I don't know. It is going to be quite an expense for us -- we are willing to accept it and go right ahead and have for several years now running these tests.

I don't know what a good answer is -- perhaps a -- monitoring of something should be something we could consider.

I just think certainly some of these issues should be something that could be clarified and I hope that the other points you made weren't equally counted.

DR. EPSTEIN: I am sorry if there was any ambiguity in my statements.

I hadn't realized there was, but let me try to put the record straight.

The Foster D. Snell - Arthur D. Little economic impact analysis was based on the standard of one-half per million. That is a matter of record. The first point.

The second point is that with

relation to the testing, to suggest that the
L79 problems of distortion and manipulation and adequate data and adequate data base are exceptional is -- I regret to say, just totally untrue and let me give you one true example to indicate this.

After a Commissioner Smith and John Qualls from EPA testified before Senator Kennedy with relation to --

(WHEREUPON, the witness was unintelligible.)

DR. EPSTEIN: -- hectochlor -- and FDA, EPA requested or rather ordered analysis of the data on 24 pesticides which were selected on the basis of the highest tolerances to common foods.

That means to say you take the foodstuff, you find which 24 pesticides occur at the highest concentrations in test foods.

Letme give you the references among other things, to this, so you can have an oppotunity to check.

Incidently, I do have a prepared statement which will give you detailed documentation

of some of these manipulations of data. And I am happy to extend such details for you if you so wish.

I would refer you to the Staff Report of the Environmental Protection Agency Committee on Judiciary Report, which, among other things, will refer to several group analyses.

Now, the data on these 24 pesticides were analysed independently, and in 23 out of these 24 pesticides, the conclusion was drawn that the quality of the data was so inadequate and so defective as not to warrant the development of any inferences whatsoever as to safety or hazard.

This is a matter of record -- of 24 pesticides that were pulled off the shelf, because of the data on them, and in 23 cases it was the conclusion that the data was so lousy you can't make judgments.

Is this exceptional? Would you like me to take you down a list of pesticides, food additives, tell you which companies have manipulated, which companies have criminal

L81 indictments, which company now in Chicago is facing such indictments.

I am happy to do this.

But let that go for the moment.

The question is who will do the testing?

I have indicated that I think we have the resources in this country to do all the testing.

All we are saying is the onus of the economic burden of this should rightfully and properly rest on industry and industry at present is paying for the testing.

But we are saying for industry to protect its own interests and its own rights, it should arrange for the testing to be done by parties who have no conflict of interest so that this will insure that industry will get the highest quality data to -- in an effort which will avoid the development of irreversible or prote reversible economic commitments which will subsequently be challenged with the products being taken off the market.

It has been estimated in the

course of the last ten years, research in these areas has cost industry 10 billion dollars, by having these products taken off the market. Now this is, of course, the massive cost of regret. Because when a country loses 10 dollars, a million dollars, a hundred million dollars, when a product is taken off the market, this is a major tragedy which we must all strive mightily to avoid, and I think to talk about you and they or to be Machiavelian, and to say that ind stry does this and we do that, is not the right approach.

I think what has happened is agencies and consumer groups and -- consumer groups and industry has allowed the situation to evolve in the past.

This situation is a matter of record. The information just spoke of is unfortunately highly fraught.

We must all work together now to provide a system which will allow the generation of more reliable data.

Now, let me comment very briefly on your comments about your environmental

cancer.

I have spent a professional lifetime as a cancer research worker, and I think I have a little authority in the area.

It is not just one document, one report that states 70 to 90 percent of the cancers are environmental in origin.

Again, if you would like references, I can quote to you a list of about 20 or 30 international export and national committees that came to the same conclusion, that that isn't an isolated opinion of the WHO committee, and if you care to contact me some other time, I am more than happy to give you detailed references and other documentation.

Suffice it to say that this is the consensus of a scientifically qualified and competent field and I don't really attempt to say this in any put-down fashion, but I am sure the time is too late to go into a lengthy debate.

It is the consensus of the scientific opinion in the field over and above this the fact is this, that in addition to the vast amount of information we have on hot spots

of cancer throughout the whole world, the recent information on the NCI has indicated the various strong set of presumptive associations but in proximities to protochemical industries and clustering of high instances of certain organic cancers, but this again is a matter of record and I don't think it is possible to find any competent scientist and research worker in this field who isn't paid to say the contrary, who will disagree with this concept of the overwhelming majority of cancers are environmental in origin and hence regrettable.

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HEARING OFFICER BOTTS: Are there any other questions or comments? Any questions you would like to address either to Dr. Epstein or the members of the panel?

MR. BREMER: I would like to make a comment, Lee.

HEARING OFFICER BOTTS: Karl Bremer from EPA.

MR. BREMER: I just have one comment on the word "manipulating of data".

I don't like the word, either, and from what I have seen in the past on some of these reports that you have discussed, the

data is presently in the report. But when you have that executive summary in the front of it, and you look that the data isn't there, and that is where you are missing -- I would suggest to those industries that do send their particular chemicals out for testing, that they evaluate very closely the data when it comes back. Don't rely on the summary, read through it.

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It is just -- it may be a case of scientific laziness that the company representatives will overlook the report. And take that big thick thing and say, "Well, here is the summary in the front of it looks okay."

So, this is where you come into play.

If you are paying for it, get your money's worth. Read it.

HEARING OFFICER BOTTS: I think David Comey has a comment on that point and then the gentleman over there has a question.

MR. COMEY: Well, I agree with what Karl had to say. -- those executive summaries are very, very often -- don't bear too much resemblance to what is in the body of the report itself, and if you take the trouble to fly through the appendices

and the tabular data, you will find that whoever wrote the executive summary has probably had in mind of the future contracts which his consulting company may get. And I -- I say this from experience.

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I mean, Karl used to work for a consulting firm and so did I. And I have seen this process happen firsthand.

I think that based on my own experience of seeing firms hire to prepare environmental impact statements, that you have precisely what is happening there.

People know that if they come down very hard saying that something is a project that is environmentally unacceptable, they don't make the cost-benefit ratios come out right and chances that they will be retained by a utility company or by some other agency to produce future environmental impact statements will considerably be jeopardized.

This is why I think Dr. Epstein is really on the right track by saying you have to have a completely open bidding system, you have to have a buffer, there must be shielding between

the people who want to market the product and the people who are going to be actually doing the testing.

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I would like to make one further comment -- and that is that in my own experience in the nuclear field, I found that probably the worst people that I really want to have to go standard setting in the field are the physical biologists or radiologists biologists who are the head physicists.

I think this is the reason to believe that proximity really breeds contempt and these people are so used to slopping things around that they really get pretty inured to the hazards involved.

And, over the last few years that I have been working in the toxic substances field, I found the same is true of toxicologists, and in fact I was talking on the telephone the other night to someone in the government who is going to play a very important role in the entire field of toxic substances control, and I said something about toxicologists, and he said, "My god, those are the last people we want making the

decisions on this."

L88 He said, "Whenever we go out and we talk to industrial associations or toxicologists, they start booing in the middle of the speech when we start saying that environmental carcinogens are a major problem because their whole philosophy seems to be in askewed direction."

So, I think we really have to examine the whole question whether or not the people who are going to be doing the testing aren't right now kind of a captive group.

We may have to kind of reprogram their thinking to get them back to neutral objective grounds.

HEARING OFFICER BOTTS: We have gotten into a somewhat technical discussion here.

I would like to take this opportunity to say that the Environmental Protection Agency does wish to have comments from the public -- not only about the technical matters that are published in the Federal Register, but about our exercise of responsibilities under the Toxic Substance Control Act. And if persons in the audience who were not directly involved as an industry person or as a

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government agency person with the law would like to make comments on any of this -- subjects being discussed here tonight, you can mail those comments to the Legal Office of the Environmental Protection Agency here in Chicago, 230 South Dearborn, Chicago, 60604, and we will forward them to the proper division of the Agency as is already been suggested.

Some of these matters, however, are legislative matters -- and EPA would not be able to do anything about them, even if we wanted to, because we are simply trying to carry out what we understand Congress to have intended us to do.

The gentleman over here had a question and then your question -- I ask you again, please to state your name so that the court reporter can get it.

MR. COX: Al Cox, C-o-x.

In the mother's milk, but in the alternative formulations, how much PCB is in that? Cow's milk and the alternative formulation?

HEARING OFFICER BOTTS: Karl, do you know the answer to that?

L90 MR. BREMER: In the what -- in the alternative formulation?

HEARING OFFICER BOTTS: If you feed the baby cow's milk instead of mother's milk --

MR. COX: Or soybean.

HEARING OFFICER BOTTS: -- how much PCB's will get?

MR. BREMER: I can't remember the averages offhand from the Colorado State Study.

There were only 65 samples of I think some 2,000 that were supposed to come in, but they were running in the -- I believe it was one to three part-per-million range for mother's milk that was tested for PCB's.

It is funny because I think it's been known for quite some time, there were quite a few Canadian studies that were conducted in, I believe it was Ottawa and Ontario, by the Environmental Health Department there, and they indicated some years back, at least three to four years back, that levels in Ottawa Ontario were running around the same range.

As far as getting averages on cow's milk, there are contaminated batches and

uncontaminated batches of cow's milk that you know we have looked at.

There was, as you probably know, in Indiana, what they call some selected blending of contaminated and noncontaminated milk, so that the final product would come out -- smelling like a rose, and I was quite pleased to see that Al Hoding, the FDA inspector in Detroit wrote a letter to that effect and straightened out the situation in Indiana.

Levels in cow's milk, from what I have seen, those, generally run in the below part-per-million range -- that is all I can really say at this time.

HEARING OFFICER BOTTS: We had a comment over here.

(WHEREUPON, a short interruption was had.)

MR. KLINE: My name is Steve Kline, I am not associated with government or industry.

I guess my statement is more in the nature of a question than a comment, and I suppose Mr. Bremer would be the best qualified to answer it.

I am not as much concerned as I used to be about the "us against them" syndrome as I am really about the "us against us" syndrome and that is -- where there are lots of federal agencies, with perhaps overlapping jurisdictions, the question becomes, I suppose, from the public's point of view, and the industry's point of view, who has the ultimate authority; and more importantly, when one agency who does have that authority is not active, which agency will step into fill the void.

Now, my question really relates to Section 9 of this Act which in a brief reading, seems to me to that if the Administrator of the EPA has determined that a substance constitutes a risk, and that risk can be allievated by application of a federal law administered by another federal agency, the Administrator of the EPA would file a report published in the Federal Register, or -- a report which he would turn over to that agency.

MR. BREMER: For example, you know, I saw to OSHA --

MR. KLINE: Right, right, that is the way I interpret this, asking that that other agency

do something.

But then, further on in the same section is says that, "If that other agency has declared -- declares that there is no risk, then the Administrator doesn't do anything -- can't do anything"; as I read this.

Now, my question to you is -- in what way?

MR. BREMER: I thought I understood it the other way.

MR. KLINE: Okay, clarify that for me.

MR. BREMER: Yes, that he could.

MR. KLINE: It says, as I understand it, "He may not take action under Section 6 or 7 with respect to such risks."

This is in Section 9A -- whatever -- to --

MR. BREMER: The way I understood that section of the Act is that if it was deemed an unreasonable risk, that if other legislation or another agency more directly involved, for example, OSHA, in a work-related problem, that he would draw up his recommendation and forward it to that agency and ask them to act. And if indeed they

94 didn't act, and EPA saw, as an imminent hazard that the Administrator could act, now maybe you don't have to put that over.

MR. KLINE: Well, I will just read you what caused my concern.

It says here in Subsection 2 of that Section 9A, I guess it is, "That if the Administrator makes a report under Paragraph One with respect to a chemical substance or mixture, in the agency to which such report was made either A, issues an order declaring that the activity or combination of activities specified in description of risk described in the report does not present the risk being described in the report then -- " Skip on -- skipping B, "The Administrator may not take any action under Section 6 or 7 with respect to such risks."

Now, whatever I mean, if my brief reading of it is incorrect, my question to you, I suppose, is a little bit early, but is there any mechanism or do you anticipate any mechanism whereby the EPA will be able to protect the public's interest in the event that other agency refuses or neglects to act?

95 HEARING OFFICER BOTTS: Well, we understand that that was the intent of Congress to give that authority to EPA.

So that in the event of the failure of the use of other authority, that EPA would be able to step in -- where EPA determined that there was an imminent hazard or threat to public health.

David?

MR. COMEY: Well, I would like to point out that what Steven said is precisely so.

So it says that the Administrator may not act.

DR. EPSTEIN: That is absolutely correct.

The Administrator doesn't have the right to act in those instances where specific legislative authority has already been granted to other agencies and there is a very specific exclusion for food, for air pollutants, materials covered on to existing legislation to specifically exclude from the authority of the EPA Administrator.

MR. KLINE: So here the Administrator has determined --

HEARING OFFICER BOTTS: I am going to have

to cut you off and tell you you better ask your congressman because that is where the problem is.

MR. BREMER: You can always work something like that from another angle.

HEARING OFFICER BOTTS: Shhhhh --

Are there any other comments or questions?

MS. HOUSTON: My name is Margaret Houston, and I am a chemist, and I would like to stand up for the integrity of at least the chemists and other scientists that I have known.

I went to work 35 years ago for the Department of Agriculture and men who hired me said, "You will enjoy working in the laboratory because truth is of paramount importance."

When you run an experiment, someone can repeat your experiment and show whether you are correct or not.

And the scientists that I have known, in my experience, have acted in this manner.

I was in charge of a laboratory for 20 years doing work for the industry, and we

did exactly what you are talking about, Dr. Epstein. Samples were run as unknowns and if we goofed, the analysis was repeated at no charge to the customer.

If the customer challenged it, we repeated it and if the results were the same, they paid twice.

These things can be handled.

Scientists, I think, it's a part of their training to be honest.

We have come in the last 25 years to know a lot more than we knew at that time. And some of these disciplines are in their infancy and there are sincere -- evidently sincere disagreements between experts -- and if the experts can't agree, how can the laypeople here decide?

And I would just like to have the laypeople here go home with the idea that scientists, if they are truly scientists, are honest.

(Applause.)

HEARING OFFICER BOTTS: Is there a question or a comment over here?

98 MR. SCHAUFNER: Thank you very much, Margaret, I appreciate --

HEARING OFFICER BOTTS: Would you give us your name, please, sir?

MR. SCHAUFNER: I will, yes, sure, Jim Schaufner, Chairman of the Chicago Section of the Chemical Society.

I sound big gun, but I change hats when the sun goes down.

Margaret was addressing herself to one particular question which I think is very real and it is true, it's got a lot of truth in it.

I was going to -- at least I am going to speak to a question which I think is also very real -- and that has to do with the last -- it picks up on the last part which she was saying about the fact that we are in areas which are unknown, which knowledge, new knowledge is being developed every day.

There are some things that we only know to talk about today -- because of the fact that -- analytical procedures have become so sensitive in the last few years -- and we

wouldn't have noted that these things were there unless some analytical techniques -- some analysts didn't find them. And that is something that we have to deal with, too -- on the fact that we are hitting moving targets all the time.

Another thing that -- a question that -- a question that -- it is in my mind, in that I think that all of us should take into consideration is -- that we should try to get out of the habit of finding devils, as the cause for whatever it is that is ailing us at the moment.

There are honest errors. There are also inept procedures.

For example, I am a chemist, but I really am not conversant with -- I don't know if somebody were to ask me, "How do you go about setting up a testing laboratory?" "Is is licensed? What are the protocols?" I wouldn't know that.

We are getting information from these laboratories on which we base -- decisions -- which determine, you know, literally

life and death whether we want to produce certain things or not.

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We withdraw chemicals from the market. What type of standards do these laboratories have to meet with regard to their personnel who are running the tests; are they chemists? Are they biologists? What are the licensing procedures that go into this type of thing, you know?

I think that is very important and it is very real.

I don't think it is something that has really been looked into.

I think that before we begin to talk about independent laboratories, we have to find out what constitutes the procedures, the protocols, the personnel of those independent laboratories, how reliable are they? You know?

We are accepting this information and we are basing -- our economy, the way we do our research, a large portion of our technology -- on this.

We haven't looked at those laboratories. There are a lot of people who are

gearing up right now, for example, to really get the business from the Toxic Substances Act.

Are they really ready to -- to deal with the type of questions that they are going to be getting?

Is the information from those laboratories going to be reliable?

I really don't think that has been looked at.

And I think that this is an area that we have let go by itself. Just sort of a run on and accept the information from them.

Now, I haven't -- happen to know, for example, that licensing of chemists has been a very serious question in chemical societies.

Presently, chemists are not licensed.

There has been -- very deep concern among chemists that certain laboratories can get an individual, and put him in a laboratory where he is doing chemistry, and yet he does not have the proper background and yet people accept his information and use it to make decisions on.

HEARING OFFICER BOTTS: Is there anyone else who would like to comment or who has information on this point?

MR. SCHAUFNER: Could I finish -- could I finish my point, please?

HEARING OFFICER BOTTS: Sorry.

MR. SCHAUFNER: I think that -- that is the question that we need to address.

Now what has happened -- in testing this is that the American -- certain jurisdictions, certain chemical societies have sent around several samples to laboratories and they are only analyzing for one component, and they have got a variety of answers in all cases -- as to what the nature, as to what the percentage of one component was in one particular sample.

That is because laboratories are really not licensed. I think we need to deal with that question.

HEARING OFFICER BOTTS: I am sorry --

I will ask again, does anyone else have a comment on that point?

Are there any other comments? It is getting rather late. Some people have been

103 here all day.

Are there any questions?

MRS. WERNER: This may or may not be appropriate, but Mr. Denslow, this afternoon was hoping that EPA would exempt from the Act or from consideration of the Act the waste streams of industry.

One of the things that I was very hopeful about when I read this Act, was that this was something that the Act would address itself to because we have no idea now what happens to different waste materials when they are discharged into the water or air or soil or wherever they are discharged so they very often combine with other chemicals which, I am sure all of the industry people are well-aware of, but maybe some of the laypeople in the audience are not, and we know nothing, absolutely nothing whatsoever about what the byproducts of those combinations are and what the effects of those are -- on us or on wildlife or on anything else.

And I just had to concern that -- that I really want EPA to stick to their guns

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and leave that -- don't leave that provision alone, please don't ignore it, it is important, to me, as an ecologist, and to a lot of other issues.

HEARING OFFICER BOTTS: Well, I guess I will take this opportunity to point out that there was a second law passed by the 94th Congress which is called "The Resource Recovery Conservation Act", which is the other new law that EPA has to administer. And under this law, we will have to be dealing with the questions of how to safely dispose of wastes of all kinds, including hazardous materials.

There will be a public meeting on that Act on March 21 and 22 -- at the Holiday Inn in Rosemont.

Further information about that meeting can be obtained either from the EPA Newsletter that is on the table outside or by calling the Public Affairs Office of the Regional Office of EPA.

I think Dr. Epstein said that he wanted to -- to comment on that?

DR. EPSTEIN: Just very briefly. Unfortunately, it is not a question of looking for devils.

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I have indicated to you already, that a random sample of 24 pesticides pulled off the shelf by EPA in response to Congressional initiatives revealed that the data -- was on defective -- so as not to allow -- one of the problems in this whole field has been that fact that agencies have been obliged to keep, whether we want to keep data confidential, data submitted by industry in support of petitions or registration -- such data confidential -- and such data until recently has been totally inaccessible to the public.

Which has been one very, very important method, one very, very important additional constraint because when there is not an opportunity for outside investigation, this builds in the possibility -- this builds in likelihoods of close relationships put into industry and the agency concerned.

But, I don't think also it is a question of honest differences of opinions.

I have already indicated to you that in several instances, of the recent cancellation suspensions of pesticides, when the

industry pathologists found no cancers in the sections, these same sections were shown to teams of independent outside pathologists who looked to them in some instances as blind bait, and where the industry pathologists found no cancer, the outside pathologists found a high incidence of cancers, but not one pathologist, four, five, six pathologists -- and this is not an isolated incident, this is the common patent accounts.

And not only this, not only is it just a question of this major difference of opinion and I can assure you as a professional pathologist, that it isn't very difficult to diagnose a cancer -- to tell the difference between a cancer and a non-neoplasm [phonetic] not only that, but in many instances, the industry concerned had actually been told by its own consultants that the section showed cancer and there is a criminal investigation going on at the moment in Chicago which you will be reading about very shortly.

In other instances Congressional investigations have documented the fact that

records of -- in destruction -- records have been destroyed, that nonexisting sections have been reported on, diagnoses have been changed.

Now, how much documentation do you mean.

The record is abundantly clear.

If you want to be specific, go down chemical by chemical, the record is abundantly clear.

What is more profitable is not to dispute the indisputable fact, but rather than try to say "Mistakes have been made in the past", how can we, industry, government, academia, scientific community, consumers, work together to try to assure this patent of constraint and supression inadequate in the whole range of constrained data -- isn't repeated in the future and I think it is the important question to be asked now.

HEARING OFFICER BOTTS: Thank you, Dr. Epstein.

It seemed like a good note to end on unless anyone else has any questions or comments.

I want to thank all of you very, very --

Mary Ann Smith, excuse me.

MS. SMITH: I would like to urge all the public citizens attending to muster themselves and join the citizen's action group -- join the citizen's action group of your choice or work with the EPA to help us monitor the progression of the Toxic Substances Act.

Thank you.

(Applause.)

HEARING OFFICER BOTTS: Thank you.

I remind you one more time if you want additional information to contact EPA here in Chicago. Thank you again.

(Which were all the proceedings had.)

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STATE OF ILLINOIS)
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COUNTY OF C O O K)

DIANE HROMEK, being first duly sworn, says that she is a court reporter doing business in the City of Chicago, and that she reported in shorthand the proceedings had at the hearing of said cause, and the foregoing is a true and correct transcript of her shorthand notes, so taken as aforesaid, and contains all the proceedings of said hearing.

Diane Hromek & Associates, Inc.

SUBSCRIBED AND SWORN TO
before me this 16th day of
March, A.D., 1977.

Notary public